UNIVERSITI TEKNOLOGI MARA

IMPROVING THE WRINKLE RESISTANCE OF COTTON AND RAYON BATIKS

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Thesis submitted in fulfillment
of the requirements for the degree of
Master of Science

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AUTHOR'S DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the result of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

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ABSTRACT

Malaysians are proud of their batik fabrics and products. Various promotional events such as "Batik Crafted for the World" and "Piala Seri Endon" competition were introduced to promote and enhance the popularity of batik. Batik designs are normally applied on silk, cotton and rayon fabrics. However, the problem with cotton and rayon batiks is that they wrinkle badly. In addition, the application of wrinkle free finishes was not formulated specifically for batik fabric. Existing wrinkle free finishes have very good effect on normal fabrics; however the applications of these finishes on batik fabric are not effective. Newer formulations of the wrinkle free finish and the application techniques for batik fabric were studied. The main purpose of this study is to develop a formulation for cotton and rayon batiks to improve wrinkle resistance. The formulation consists of wrinkle resistance agent, magnesium salt, acid and softener. The formulation was applied to cotton and rayon batik fabrics by using padding mangle method and exhaustion method. The comparisons of the two different application methods were analyzed by evaluating the handle properties which are wrinkle recovery appearance, stiffness and wrinkle recovery angle. Both methods indicated almost similar results for stiffness and wrinkle recovery angle testing. However, for wrinkle recovery appearance testing, padding mangle method produced better result. Further testing on the formaldehyde content and colourfastness to washing were also implemented to assure that the fabrics are safe to the wearer and the finishes that were applied to the fabrics did not bring down the colour of the fabrics. The adoption of this unique technique will evidently improve the quality of Malaysian batik.

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